

# EMILY S. FINN

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## EDUCATION & TRAINING

- 2017-present*    Postdoctoral Fellow, National Institute of Mental Health, Bethesda, Md.  
Section on Functional Imaging Methods  
Mentor: Peter A. Bandettini, Ph.D.
- 2012-2017*      Ph.D., Yale University, New Haven, Conn.  
Neuroscience, awarded May 2017  
Advisor: R. Todd Constable, Ph.D.
- 2005-2009*      B.A., Yale University, New Haven, Conn.  
Linguistics, with Distinction, *summa cum laude*  
GPA: 3.95/4.0

## GRANTS & AWARDS

- 2016*            Organization for Human Brain Mapping Merit Abstract Award
- 2014-2017*      National Science Foundation Graduate Research Fellowship
- 2012-2014*      Gruber Foundation Fellowship
- 2012*            Yale Bioimaging Sciences Retreat: Best Poster Award
- 2009*            Phi Beta Kappa
- 2009*            Daniel E. Merriman Prize for Outstanding Leadership
- 2005*            Robert C. Byrd Scholar, Connecticut
- 2005*            National Merit Scholar

## PEER-REVIEWED PUBLICATIONS

**Finn ES**, Scheinost D, Finn DM, Shen X, Papademetris X, Constable RT. (in press). Can brain state be manipulated to emphasize individual differences in functional connectivity? *NeuroImage*.

Rosenberg MD, **Finn ES**, Scheinost D, Constable RT, Chun MM. (2017). Characterizing Attention with Predictive Network Models. *Trends in Cognitive Sciences* 21: 290-302.

Shen X, **Finn ES**, Scheinost D, Rosenberg MD, Chun MM, Papademetris X, Constable RT. (2017). Using connectome-based predictive modeling to predict individual behavior from brain connectivity. *Nat. Protocols* 12: 506-18.

Scheinost D, Tokoglu F, Shen X, **Finn ES**, Noble S, Papademetris X, Constable RT. (2016). Fluctuations in global brain activity are associated with changes in whole-brain connectivity of functional networks. *IEEE Transactions on Biomedical Engineering*, 63(12): 2540–2549.

Pinango MM, **Finn ES**, Lacadie C, Constable RT. (2016). The localization of long-distance dependency components: Integrating the focal-lesion and neuroimaging record. *Frontiers in Psychology*, 7: article 1434.

Noble S, Scheinost D, **Finn ES**, Shen X, [...], Cannon TD, Constable RT. (2017) Multisite reliability of MR-based functional connectivity. *NeuroImage*, 146: 959-970.

**Finn ES**, Constable RT. (2016). Individual variation in functional brain connectivity and its implications for personalized approaches to psychiatric disease. *Dialogues in Clinical Neuroscience*, 18(3): 277–287.

Rosenberg MD, Zhang S, Hsu WT, Scheinost D, **Finn ES**, Shen X, Constable RT, Li C, Chun MM. (2016). Methylphenidate modulates functional network connectivity to enhance attention. *Journal of Neuroscience*, 36(37): 9547–9557.

Rosenberg MD\*, **Finn ES**\*, Scheinost D, Shen X, Papademetris X, Constable RT, Chun MM. (2016) A neuromarker of sustained attention from whole-brain functional connectivity. *Nature Neuroscience*, 19: 165–171.

\*Authors contributed equally

**Finn ES**\*, Shen X\*, Scheinost D, Rosenberg MD, Huang J, Chun MM, Papademetris X, Constable RT. (2015) Functional connectome fingerprinting: Identifying individuals using patterns of brain connectivity. *Nature Neuroscience*, 18: 1664–1671.

\*Authors contributed equally

Press coverage: BBC, NBC, PBS, CBS, Newsweek, Scientific American, Discover, Wired, Nature News, The Scientist

Companion article for lay reader: [TheConversation.com](http://TheConversation.com)

Powers III AR, Ganscos MG, **Finn ES**, Morgan PT, Corlett PR. (2015). Ketamine-induced hallucinations. *Psychopathology*, 48 (6): 376-385.

Garrison KA, Scheinost D, **Finn ES**, Shen X, Constable RT. (2015) The (in)stability of functional brain network measures across thresholds. *NeuroImage*, 118: 651-661.

Rosenberg MD, **Finn ES**, Constable RT, Chun MM. (2015) Predicting moment-to-moment attentional state. *NeuroImage*, 114: 249-256.

Scheinost D, **Finn ES**, Tokoglu F, Shen X, Papademetris X, Hampson M, Constable RT. Sex differences in normal age trajectories of functional brain networks. *Human Brain Mapping*, 36(4): 1524-1535.

**Finn ES**, Shen X, Holahan JM, Scheinost D, Lacadie C, Papademetris X, Shaywitz SE, Shaywitz BA, Constable RT. (2014) Disruption of functional networks in dyslexia: A whole-brain, data-driven analysis of connectivity. *Biological Psychiatry*, 76(5): 397-404.

Scheinost D, Shen X, **Finn ES**, Sinha R, Constable RT, Papademetris X. (2014) Coupled intrinsic connectivity distribution analysis: A method for exploratory connectivity analysis of paired fMRI data. *PLoS ONE*, 9(3): e93544.

Constable RT, Scheinost D, **Finn ES**, Shen X, Hampson M, Winstanley FS, Spencer DD, Papademetris X. (2013) Potential use and challenges of functional connectivity mapping in intractable epilepsy. *Frontiers in Neurology*, 4 May: 39.

## BOOK CHAPTERS

**Finn ES**, Scheinost D, Shen X, Papademetris X, Constable RT. Methodological Issues in fMRI Functional Connectivity and Network Analysis. In *Brain Mapping: An Encyclopedic Reference*, ed. Toga, AW, Elsevier Inc., San Diego, 2015, pp. 697-704.

## INVITED TALKS

2017	South by Southwest, Austin, TX
2016	Fifth Biennial Conference on Resting State Brain Connectivity, Vienna, Austria
2016	Centre for Functional MRI of the Brain (FMRIB), University of Oxford, UK
2016	Max Planck Institute, University College London, UK
2016	National Institute of Mental Health, Bethesda, Md.
2016	3 <sup>rd</sup> Biennial Brain Function Workshop, Whistler-Blackcomb, BC, Canada
2015	Kavli Brain Coffee Hour, Yale Institute for Network Science, Yale Univ.
2015	American Society for Neuroradiology Annual Meeting, Chicago
2014	2 <sup>nd</sup> Biennial Brain Function Workshop, Whistler-Blackcomb, BC, Canada
2014	Magnetic Resonance Research Center Seminar Series, Yale Univ.

## CONFERENCE ORAL PRESENTATIONS

2017	Computational Neuroscience Society, Antwerp, Belgium
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- Workshop: “Fingerprints of brain dynamics estimated from neuroimaging data and application to discrimination between individuals, tasks and/or conditions”
- 2017      Organization for Human Brain Mapping, Vancouver, Canada  
Symposium: “Relating connectivity to inter- and intra-individual differences in attention and cognition”
- 2017      Organization for Human Brain Mapping, Vancouver, Canada  
Educational Workshop: “Taking Connectivity to a Skeptical Future: Challenges, Tools and Techniques”
- 2017      Society of Biological Psychiatry, San Diego  
Symposium: “Disease Connectomics: From Gene Expression to Large-Scale Brain Networks”
- 2012      Society for Neuroscience Annual Meeting, New Orleans  
Nanosymposium: “An investigation of functional networks in dyslexia using graph theory and a novel method for brain parcellation.” **Finn ES**, Shen X, Holahan JM, Scheinost D, Lacadie C, Papademetris X, Shaywitz SE, Shaywitz BA, Constable RT.

## CONFERENCE POSTER PRESENTATIONS

*(selected; first author only)*

**Finn ES**, Shen X, Scheinost D, Qiu M, Corlett PR, Constable RT. Investigating the stability of the functional connectome fingerprint under anesthetic drugs. Conference on Resting State / Brain Connectivity, September 2016, Vienna.

**Finn ES**, Shen X, Scheinost D, Qiu M, Corlett PR, Constable RT. Investigating the stability of the functional connectome fingerprint under anesthetic drugs. Organization for Human Brain Mapping, June 2016, Geneva.

**Finn ES**, Shen X, Scheinost D, Rosenberg MD, Huang J, Chun MM, Papademetris X, Constable RT. The individual brain connectome predicts fluid intelligence. Organization for Human Brain Mapping, June 2015, Honolulu, HI.

**Finn ES**, Tokoglu F, Shen X, Hoffman RE, Constable RT. Resting-state brain networks predict severity of auditory hallucinations in schizophrenia. Society for Neuroscience Annual Meeting, Nov 2014, Washington, DC.

**Finn ES**, Rosenberg MD, Shen X, Scheinost D, Papademetris X, Chun MM, Constable RT. Complex brain networks at rest predict individual working memory and attentional performance. Fourth Biennial Conference on Resting State/Brain Connectivity, Sept 2014, Cambridge, MA.

**Finn ES**, Scheinost D, Hampson M, Shen X, Tokoglu F, Papademetris X, Constable RT. Sex

differences in functional brain organization detected using a novel voxelwise, threshold-free measure of intrinsic connectivity. Poster presented at The Networked Brain, a Cell symposium prior to Society for Neuroscience Annual Meeting, Nov 2013, San Diego.

**Finn ES**, Rosenberg MD, Shen X, Chun MM, Constable RT. Predicting attention and performance across varying task loads from complex networks during task and at rest. Society for Neuroscience Annual Meeting, Nov 2013, San Diego.

**Finn ES**, Shen X, Holahan JM, Scheinost D, Lacadie C, Papademetris X, Shaywitz SE, Shaywitz BA, Constable RT. Identifying group differences in functional subnetworks: a novel whole-brain method applied to dyslexia. International Society for Magnetic Resonance in Medicine Annual Meeting, Apr 2013, Salt Lake City.

**Finn ES**, Kim I, Piñango MM. On the status of intermediate gaps in sentence processing. CUNY Conference on Human Sentence Processing, March 2010, New York.

## TEACHING

*Fall 2015*      Teaching Fellow, Introduction to Cognitive Science (Yale College)  
                    Prof. April Ruiz

*Fall 2013*      Teaching Fellow, Introduction to the Human Brain (Yale College)  
                    Prof. Amy Arnsten

## SELECTED POPULAR PUBLICATIONS

“How I Learned to Stop Worrying and Love Linguistics”. *The New York Times*, July 20, 2009.  
“Brain activity is as unique – and identifying – as a fingerprint.” *TheConversation.com*, Oct 12, 2015.

## POPULAR LECTURES

*2017*            “Can you lie to MRI? The science of mind reading”  
                    Panel at South by Southwest, Austin, TX

*2013*            “Mind Reading: Can we do it? Should we?”  
                    New Haven Free Public Library, Science in the News series

## UNIVERSITY SERVICE

*2014-2016*      Yale Magnetic Resonance Research Center Seminar Series organizer

*2013-2014*      Interdepartmental Neuroscience Program Student-Faculty Lunch organizer

*2013*            Interdepartmental Neuroscience Program NeuroDay planning committee

## **PROFESSIONAL AFFILIATIONS**

Organization for Human Brain Mapping  
Society for Neuroscience

## **AD HOC REVIEWING**

Brain  
Cerebral Cortex  
Developmental Cognitive Neuroscience  
Frontiers in Human Neuroscience  
Network Neuroscience  
NeuroImage  
PLoS Computational Biology  
PLoS ONE

## **SKILLS**

Spanish (fluent), French (proficient), German, Russian, Modern Greek (reading proficiency)  
CrossFit Level 1 Trainer